

REMARKS

This communication is in response to the Office Action mailed on June 30, 2006 and the Advisory Action mailed on November 24, 2006. Additionally, this communication follows an Examiner Interview between the undersigned, Mr. Chris Volkmann and Examiner Lewis conducted on November 29, 2006. During the interview, differences between the subject matter of the present application and the reference used by Examiner Lewis were discussed. Further, the claim language "without resorting to a multiple-tap approach" of claim 1 was discussed. While no specific amendments were agreed upon, the Examiner indicated that further clarification of the claim language regarding the "multiple-tap approach" may be needed. The undersigned thanks Examiner Lewis for his time in conducting the interview. With this Amendment, claims 1, 18, 27, and 35 have been amended. All remaining claims are unchanged. In view of the following, reconsideration and allowance of all pending claims are requested.

On page 2 of the Office Action, claims 1-45 were rejected under 35 U.S.C. 102(e) as being anticipated by Savolainen (U.S. Pub. No. 2002/0126097). Of these claims, claims 1, 18, 27 and 35 are in independent form. These claims have been amended to clarify selection of initial letters for a word. As discussed below, subject matter disclosed in the present application relates to selecting an initial sequence of letters without resorting to a multiple-tap approach. In a multi-tap approach, one of the keys is pressed at least once for each letter. For example, on a standard phone keypad, a user could indicate the letter "B" by tapping the number 2 two times. By not resorting to a multi-tap approach and when the intended word does not appear in the list or when the intended word is not in the vocabulary, or dictionary, being used, a more useful manner for selecting words is provided. For example, if the present invention is used in conjunction with a standard telephone keypad and the user presses the number 6 as the first key in the input sequence, the user may have intended either "M", "N", or "O". If the intended word does not appear in the list of possible words, the user may specify the first letter of the sequence as being one of "M", "N", or "O" without resorting to a multiple-tap approach. In this manner, the list of possible intended words would be redetermined using the same sequence of input keys having the user selected letter as the first letter in the sequence. As a result, a more user-friendly approach to entry of words using a reduced

keypad is realized.

Savolainen describes a method for entering alphanumeric data. In particular, Savolainen discloses a method of entering text using a reduced keyboard. Vocabulary modules are used to associate a list of possible text outputs given a keyboard sequence inputted by the user. The list contains objects in the vocabulary which match the entered keyboard sequence and are listed in a selection list according to the frequency of use. To specify individual letters in the sequence, which is especially important in cases in which the intended word is not in the vocabulary modules or related dictionaries, the user uses a multiple-tap (multi-stroke) method in which the key is pressed at least once for the intended letter (see FIG. 10, S113). In other words, the multiple-tap method is utilized to enter each letter of the intended word when the word does not appear in the vocabulary modules or related dictionaries. Thus, Savolainen teaches away from selection of individual letters without using a multiple-tap approach.

Independent claim 1 recites a method for selecting an intended word entered using a reduced keypad. Each of one or more keys of the reduced keypad is mapped to a plurality of letters. For an entered key input indicative of pressing one or more keys in the reduced keypad using a single-tap approach in which one of the keys is pressed only once for each letter such that each key press is mapped to only one letter, the method includes determining one or more sequences of letters as the intended word based on a score for each of the one or more sequences of letters. The one or more sequences of letters are presented as the intended word. A user selects the intended word from the one or more sequences of letters without resorting to a multiple-tap approach in which one of the keys is pressed at least once for each letter such that a number of times one of the keys is pressed indicates only one letter. The user can indicate without resorting to the multiple-tap approach an accepted one or more initial letters of the intended word from the one or more sequences of letters. The one or more initial letters has less letters than the intended word. Redetermination of the one or more sequences of letters is presented as the intended word.

During the Examiner interview conducted on November 29, 2006, the Examiner asserted that utilizing any two taps would be a "multi-tap" approach. However, Applicants point out that the multiple-tap approach in claim 1 is recited as one "in which one of the keys is pressed at

least once for each letter." Further in claim 1, the "one of the keys of the reduced keypad is mapped to a plurality of letters." Thus, in the "multiple-tap" approach, there is a correspondence between one or multiple key taps for one character. On the other hand, in a single-tap approach, there is a correspondence between a single tap of a single key and one character. Thus, based on the language of claim 1, Applicants submit that the recited feature "without using the multiple-tap approach" is clear and not in contrast with claim language that recites, "without resorting to a multi-tap approach".

Additionally, Applicants note that multiple portions of the specification describe the multiple-tap approach in detail. For example, page 1, line 18 - page 3, line 21 discuss the differences of the multiple-tap approach with respect to a single-tap approach. Further, several portions of the specification describe selecting a word or selecting initial letters without resorting to a multiple tap approach. For example, figures 2 and 3, and associated portions of the written description (e.g., page 15, line 9 - page 20, line 12), describe selecting words that are not present in the vocabulary and selecting initial letters without resorting to a multiple-tap approach. In particular, the second paragraph of page 15 discusses allowing a user to select the word "ioflen" given a numeric key input of 465336 using a reduced keypad even though the word "ioflen" does not appear in a dictionary. Instead of only presenting the words "golden" and "holden" (which are in the dictionary) given the input, the present application allows the user to designate letters and pseudo words outside of a dictionary without resorting to a multi-tap approach (i.e. providing three taps of '4' for 'i', three taps of '6' for 'o', etc.). It is noted that the portions of the specification cited above relating to the "multiple-tap approach" are given by way of example and are not inclusive.

Thus, Applicants respectfully submit that the claimed feature "without resorting to the multiple-tap approach" of claim 1 (and claim 35 discussed below) is clear and not in contrast to claimed features in claims 1 and 35.

In contrast to the method of claim 1, Savolainen does not enable the user to accept one or more initial letters of an intended word without using a multiple-tap approach in which the initial letters have less letters than the intended word. In FIG. 3 and its associated description, Savolainen describes traversing through a list of possible words in a dictionary dependent on user input. The

list is presented after a user has input a sequence and pressed the select key. Savolainen further describes that a multiple-tap method is used to unambiguously specify each letter for words that are not in the vocabulary modules (Paragraphs 29 and 86 and FIG. 10). Step S113 describes that a method other than the multiple-tap can be used, but does not teach or suggest selection of a particular letter or a sequence of letters. The Office Action points to paragraph 64 of Savolainen to describe selecting initial letters of a word. However, this paragraph deals with selecting an entire word (an entry in the selection list) and not one or more initial letters. If the user presses the select key, the selection list is traversed until the select key is not pressed. Then, the current entry is used as the word. Furthermore, there is simply no teaching or suggestion of selecting initial letters less than a number of letters in the intended word. Instead, Savolainen discloses selecting an entire word from a dictionary or resorting to a multi-tap approach when entering text. For at least these reasons, Applicants respectfully submit that the method of claim 1 is neither taught nor suggested by Savolainen and is in allowable form.

Independent claim 18 recites a method for selecting an intended word entered using a reduced keypad in which the user, for an entered key input, accepts letters of the intended word. A number of accepted letters is less than a number of letters for the intended word. Sequences of letters are determined as possible intended words consistent with the entered key input and the letters accepted by the user. The accepting of a letter increases the accepted letters by one and is repeated until the user selects one of the sequences of letter presented as the intended word.

In the rejection of claim 18, the Office Action cites Savolainen (figure 3, item S1 and paragraph 44) as showing an element wherein the user accepts a number of letters of the intended word. Applicants respectfully submit that Savolainen does not describe a method of accepting a number of letters of an intended word, but instead accepts an entire intended word from a vocabulary. Paragraph 44 of Savolainen describes the operation of a reduced keyboard system in which the system receives a keystroke input from the keyboard and subsequently adds the keystroke to the keystroke sequence. Subsequently, objects in a vocabulary are identified that correspond to the current keystroke sequence. In this manner, the user, by entering a keystroke, is not accepting a letter of the intended word but is instead adding an ambiguous keystroke to the sequence. The

sequence is then referenced to a vocabulary of words, rather than signifying a selection of one or more letters. In the features of claim 18, a method of allowing users to specifically accept one or more letters in the keystroke sequence and subsequently redetermining the list of possible intended words allows the list to be narrowed based on the selected letters and therefore contain possibilities that may not be in a dictionary. For at least the above reasons, Applicants respectfully submit that the method of claim 18 is neither taught nor suggested by Savolainen and is in allowable form.

Independent claim 27 recites a method for selecting a word entered using a reduced keypad including determining one or more sequences of letters consistent with the entered key input and a numbers of letters accepted by a user. The method further allows the user to accept additional letters less than a number in an intended word, thus causing the list of possible intended words to be redetermined. For example, if the user accepts three letters of the intended word and the redetermined list does not include the intended word, the user may accept one or more letters to cause redetermination of the list. Subsequently, the intended word is more likely to appear in the redetermined list. The list is determined based on a probability that the word is misspelled and taking into account an out-of-vocabulary penalty and a first occurrence bonus.

In the rejection of claim 27, the Office Action cites Savolainen (paragraphs 83 and 90) as showing an element wherein one or more sequences of letters are determined consistent with the entered key input and a number of letters accepted by the user. As discussed above, Applicants respectfully submit that Savolainen does not describe enabling the user to accept a number of letters less than a number of letters in a word such that the sequences of letters determined as possible intended words are consistent with the accepted letters. The Office Action further cites paragraph 73 and 74 to describe an out-of-vocabulary penalty and a first occurrence bonus. However, these paragraphs simply describe adding a word or words to a dictionary and does not take into account a penalty or a bonus depending on the sequence of letters. In sum, there is simply no evidence in Savolainen to support a first occurrence bonus or out-of-vocabulary penalty used as recited in claim 27. For at least these reasons, Applicants respectfully submit that claim 27 is neither taught nor suggest by Savolainen and is in allowable form.

Independent claim 35 recites an apparatus comprising a reduced keypad having a

plurality of keys used to enter a key input corresponding to a word and word-determining logic designed to determine one or more sequences of letters as the word. The user can select a word corresponding to the key input from the one or more sequences of letters without resorting to a multiple-tap approach in which one of the keys mapped to a plurality of letters is pressed at least once for each letter. Further in claim 35, the user can accept one or more initial letters of the word from the one or more sequences without resorting to the multiple-tap approach, the one or more initial letters having less letters than the word, to cause redetermination of the sequences of letters presented. Applicants note that, as mentioned above with respect to claim 1, Savolainen neither teaches nor suggests allowing the user to accept one or more initial letters of the entered key input. Applicants respectfully submit that claim 35 is in allowable form.

In addition, Applicants further submit that many of the dependent claims are independently patentable. For example, claim 3 presents a sequence of letters not in a dictionary. The Office Action cites sections that correspond to formatting a word in a dictionary (i.e., didn't) and adding a word in a dictionary, but does not present a sequence not in a predetermined dictionary. Additionally, claim 21 requires that the one or more sequences of letters determined as the intended word comprises at least one sequence of letters for each letter corresponding to a number within the entered key input immediately after a part of the entered key input accepted by the user. This feature is shown on page 18, line 13 through page 19, line 12. Simply put, this ensures that the user is able to select the next letter of the intended word as each letter corresponding to the next keystroke in the input sequence is represented in at least one word in the list of possible intended words.

In view of the foregoing, Applicants respectfully submits that claims 1-45 are not taught nor suggested by Savolainen and are in allowable form. Reconsideration and allowance of claims 1-45 are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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